National Aeronautics and Space Administration

Roundup

LYNDON B. JOHNSON SPACE CENTER

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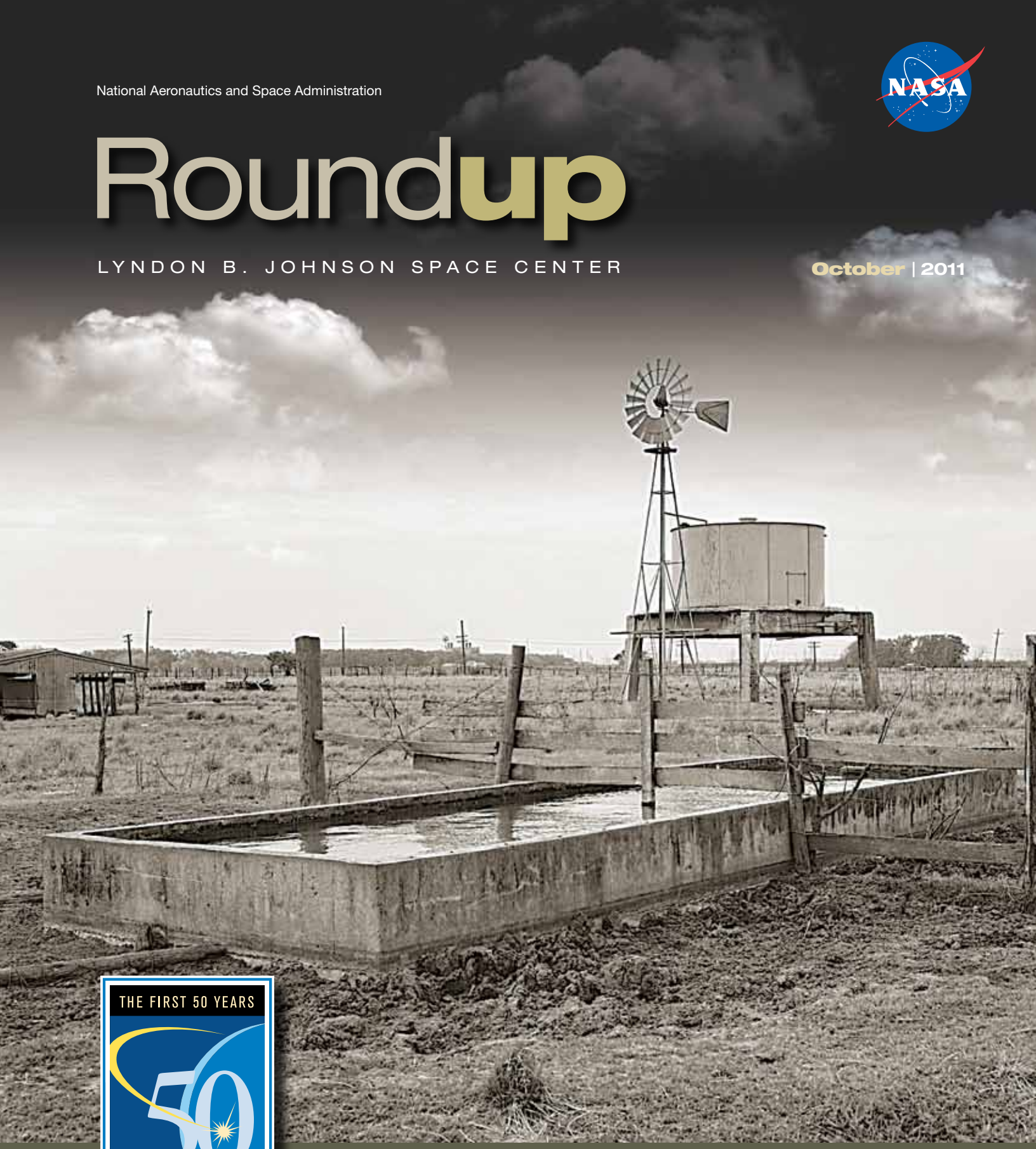

THE FIRST 50 YEARS

JOHNSON SPACE CENTER

Our home on the range

NASA/PHOTO S62-00632

On the cover:

A photograph of the Manned Spacecraft Center prior to the start of construction. What was once range land has been our "home on the range" for 50 years.

NASA/PHOTO SEAN SMITH

Photo of the month:

The crew of NASA's final space shuttle mission and "Sesame Street's" Elmo welcomed visitors to "What's Your Favorite Space?" in New York City. The free, public event was on Aug. 17. Pictured with Elmo is STS-135 Commander Chris Ferguson.

JSC Director

NASA PHOTO

I recently traveled to Denver and was able to see the Multi-Purpose Crew Vehicle (MPCV) ground test article. I enjoyed seeing the development hardware and hearing the enthusiasm of the team members. I was again impressed with the movement that the MPCV team is making in their effort to build the next vehicle for human exploration—a vehicle that, coupled with the Space Launch System, will enable us to explore beyond low-Earth orbit (LEO). If you haven't been able to keep up with the MPCV, I would encourage you to check out their Web page at http://www.nasa.gov/exploration/systems/mpcv. It has some great pictures of current progress, and I think you'll find it inspiring.

A week or so before viewing the MPCV, I visited SpaceX and was pleased to see the progress they are making toward their next cargo demo flight. Just as we need MPCV to enable human exploration beyond LEO, we need commercial cargo and crew to support our International Space Station. SpaceX and Orbital are making good strides toward their cargo demo flights, and the four commercial crew development companies (SpaceX, Boeing, Blue Origin and Sierra Nevada) are working on the next stages of developing a vehicle to take crew to and from LEO.

My point in mentioning both of these trips is to highlight that it is Johnson Space Center's job to make both MPCV and the Commercial Crew and Cargo Program successful. We do not need one or the other; we need both. Said another way, it's not an "or," it's an "and." The national policy is to shift transportation for LEO to the commercial sector. Since our crew and the space station depend on LEO transportation, it is critical that we make this a success. In addition, national policy calls for NASA to concentrate on the next big step—exploration beyond LEO. We must have MPCV to enable this and to allow us to go into the next phase of human exploration.

To accomplish this, we need the considerable talents and skills of the JSC workforce—a workforce I am incredibly proud of—to make it a success. You have demonstrated to me time and time again that you are capable of amazing things, and I have no doubt that we can add this to the list!

Mike

In this edition…

Exploring new frontiers through the **"science of opportunity"**

By Rachel Kraft

Eyes were wide open and mouths were agape as astronaut Don Pettit, a veteran of two spaceflights, shared stories of life in extreme environments at a recent storytelling event hosted by the Office of the Chief Knowledge Officer. Pettit, who will also live on station as part of Expeditions 30 and 31, spoke of exploring new frontiers, where novel observations are often made and the understanding of scientific principles can be upended.

"A new frontier is a place where intuition doesn't apply," Pettit said. "It's a place where the answers are not at the back of the book. These could be all over. Mine happens to be space and, on occasion, places like Antarctica."

Pettit detailed the ways he examined the "science of opportunity" on the International Space Station, where he investigated how surface tension, inertial force and chemical reactions are different in space than on Earth.

"(On station,) I found that you could eat your tea with chopsticks," Pettit said. "You have a sphere of tea coming out of your straw, and you can just snag those guys."

During STS-126, Pettit got a hold of some post-Halloween candy corn. He inserted the pointy ends of the candy pieces, which were hydrophobic, into a floating orb of water. The pieces were sucked into the liquid orb. Pettit populated the sphere until there wasn't room for any more candy corn.

"It turned into a rigid body," Pettit said.

NASA/PHOTO ISS006E51168

Pettit eats his tea with chopsticks during Expedition 6.

In space, Pettit could then take a bite out of it.

"These things tickle your mind and enrich your imagination, and you never know when they might come in handy later," Pettit said.

Keep your eyes and ears perked for how Pettit examines new frontiers during Expeditions 30 and 31.

Desert RATS 2011 goes deep space here on Earth

By Catherine Ragin Williams

If Black Point Lava Flow sounds forbidding, it is for a good reason. NASA's Desert Research and Technology Studies (RATS) made its 14th excursion to the Arizona Desert near this location from Aug. 27 to Sept. 12 to field test conditions that future spacefarers may encounter on alien destinations such as the moon, near-Earth asteroids, Mars' moons and even the surface of Mars.

These exercises gave investigators the opportunity to identify and establish realistic technical requirements for future exploration, as well as run experimental hardware and software in an analog setting.

Some highlights of this year's undertaking included:

- Living in and operating a Deep Space Habitat (DSH)
- "Free-Flyer" Space Exploration Vehicle crew cabin module
- Robotic assistant vehicle system (Centaur)
- Deep Space Network (communications and data network link)

The Desert RATS crew included a varied group of people throughout the space community: engineers, scientists, astronauts and technicians from NASA, industry and academia. Together they

NASA/REGAN GEESEMAN 585008MAIN

Dr. Megan McArthur works in the DSH on an assigned task to practice maintenance and repairs.

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Suitport technology enhances exploration

As part of Advance Exploration Systems (AES), the suitport concept has been conceived and implemented for use with the small pressurized lunar rover, currently the Space Exploration Vehicle (SEV) and the Multi-Mission Space Exploration Vehicle (MMSEV). This evolving technology could transform the way we explore by enhancing extravehicular activity (EVA), or spacewalk, opportunities.

A suitport replaces or augments the traditional airlock function of a spacecraft by providing a bulkhead opening, capture mechanism and sealing system to allow ingress and egress of a spacesuit while the spacesuit remains outside the pressurized volume of a spacecraft. This enhanced capability expands the spacewalking potential for astronauts in both microgravity and surface environments.

This graphic illustrates the suitport technology that will be tested in Building 32's Vacuum Chamber B.

The suitport concept will enable three main improvements in spacewalks by providing reductions in: pre-spacewalk time from hours to less than 30 minutes; airlock consumables; and contamination returned to the cabin with the spacewalker.

To date, the first-generation suitport has been tested with mock-up suits on the rover cabins and pressurized on a bench-top engineering unit. Preliminary work on the rover cabin helped to define the operational concepts and timelines and demonstrated the suitport's potential to save significant amounts of crew time. Practice with the engineering unit successfully demonstrated the pressurizable seal concept, including the ability to seal after the introduction and removal of contamination to the sealing surfaces. Equipped with this data, a second-generation suitport was designed. This updated suitport is being assembled now and will be tried out with a spacesuit prototype using the pressure differentials of a spacecraft in Building 32's Vacuum Chamber B. Tests will include human-rated suitports, the suitport-compatible prototype suit and chamber modifications. All these elements will come together in the first-ever pressurized donning of a rear-entry suit through a suitport.

The suitport project maintains intimate coordination with both the MMSEV, EVA and Portable Life Support System projects. On the vehicle side, a suitport can have significant impacts on the vehicle geometry and layout. For example, on the SEV, the aft bulkhead is sized to accommodate two suitports. This bulkhead then influences the shape of the entire vehicle. The standing height of the crew member in the suitport also affects the bench height inside the vehicle, which in turn influences the seated driving position.

Vehicle Environmental Control and Life Support Systems design is always impacted by the EVA system design. Whether it is a suit loop in the Multi-Purpose Crew Vehicle or an airlock or suitport in a lander, habitat or SEV, the integration is a critical component.

Putting lean development practices in place, the suitport plan started with minimal capabilities, simply demonstrating a future concept. A minimum of four design iteration cycles will be performed in the future. Each design cycle will include more stringent requirements, develop more capabilities and increase test fidelity until a final, spacewalk-capable product results.

"The suitport project is an important element of the AES projects at Johnson Space Center," said Matt Ondler, assistant director, Advanced Project Development. "The testing this year is critical to demonstrate the viability of the idea."

NASA/PHOTO JSC2008E125509

The suitport concept, shown here, will improve spacewalking capabilities for future explorers.

Texas Twister, rookie Longhorn reporter, interviews **Louis Parker,** someone who's been here a really long time

By Texas Twister

Last month happened to be Johnson Space Center's golden anniversary. (I wasn't sure which "metal" the anniversary was, but a married man told me this on good authority—because it's his job to know these things.)

So anyway, I was approached by the editor to interview someone who's been here a long time and can speak to the history of the center. I knew at once whom I was going to roast in the name of journalism.

"Me?" Louis Parker, Exhibits manager in JSC External Relations, said. "Why do you want to interview me? Do you think I'm an antique?!"

Silence is sometimes a very suitable answer.

Actually, Louis and I go way back. He knew how saddened I was at the folks who placed a shed over the Saturn V, which had been my pasture eye candy for years. But he claimed it was all part of an effort to preserve national treasures and keep the rocket from disintegrating further (as if my opinion on the matter didn't outweigh the Smithsonian's).

But despite my feelings, NASA—JSC in particular—loves this guy. He's been here nearly 40 years, hired on as the first administrative cooperative education (co-op) student in the Public Affairs Office back in the early 1970s. Though he had wanted to get into TV and broadcasting, the local TV channels were not hiring at the time. He had been ready to settle for being a videographer for *dental procedures*, of all things, when his University of Houston recruiter asked him to interview with the Public Affairs Office at the young Manned Spacecraft Center.

"And I said, 'Doing what?'" Louis recalled. "And they said, 'Working in the Public Affairs Office.' And I said, 'Doing what?' They said, 'Well, go and interview and find out what it is.'"

Louis found out it would be working with exhibits and artifacts, but the branch chief said he would look into getting Louis some experience on the media side. Not to mention, the gig would pay him an extra $130 per month—a lot of money back in the '70s.

"And I thought, I can learn this … this sounds pretty neat," Louis said. "We got guys on the moon and all that, so I took the job."

NASA/PHOTO S89-34280

A young Louis Parker (more than 20 years ago) works to prep an exhibit for display.

NASA/PHOTO JSC2002E47432

Louis Parker, Exhibits manager, poses inside JSC's offsite exhibits warehouse in 2002.

It's been a match made in the space heavens ever since. Well, except for when he had that seven-year itch. (And you thought that was only applicable to marriages!)

"There was a time about seven years into my career when I was getting kind of antsy and thought, maybe it's time to move," Louis said. "But suddenly I got involved in some very neat projects. When you start doing international shows and major exhibitions across the United States and going to places like Paris, it gets interesting real fast. And suddenly, seven years turned into 17 years, which turned into 27 years … and at that point I figured, yeah, I think I might stick around here. Maybe I can make a career out of this."

Louis remembers those early years fondly. As a newbie, he was impressed by the level of professionalism the NASA team showed during trying times.

"I really got a pretty good dose of the media end of what we do here because of what happened with Skylab," Louis said. "When we launched the orbiter workshop, we had a problem with the heat shield coming off, and we had to figure out if we were going to have to scrap it or if we could repair the Skylab. (We fixed it) in a relatively short amount of time and still managed to launch and get guys inside. It was amazing how quickly people around here, and really the engineers and the scientists and the people who actually make the missions happen, came together to formulate a solution for what could have been a catastrophic situation."

And with remarkable staying power similar to the cockroaches in Texas, Louis has remained to see multiple spaceflight programs come and go. He and his team convey those stories through exhibits and artifacts shown to space fans and the general public.

I asked him if he had any survival tips he wanted to pass on to those less fortunate than he has been.

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Rice University
finds 'space' in Houston

By Neesha Hosein

On the morning of Sept. 12, 1962, President John F. Kennedy gave a historic speech in Rice Stadium that propelled the course of America's space program. This talk reemphasized his speech to Congress the year prior, in which he declared the United States would put humans on the moon by the close of the decade.

Houston was the third stop on his two-day tour of the nation's manned space facilities. During his speech at Rice, President Kennedy expressed his reasons for wanting to send Americans to the moon before the close of the '60s "to become the world's leading spacefaring nation."

Long before JFK's momentous speech, before Neil Armstrong, Buzz Aldrin and Michael Collins made President Kennedy's "space race" dream a successful reality when they stepped on the Sea of Tranquility, and even before Johnson Space Center came to exist as we know it today, Rice University and NASA go back … way back. Rice gave the federal government the land where part of JSC is located. Following Kennedy's speech, Rice became the first university in the country to establish a full-scale space science program. Rice scientists designed one of the experiments conducted by Apollo 11 astronauts, and 12 of the nation's astronauts have been either Rice faculty or alumni.

NASA/PHOTO S64-21000

A ground-level view of the Manned Spacecraft Center site prior to ground breaking and the beginning of construction. Cows once grazed the land where JSC now stands. (The Manned Spacecraft Center was named Lyndon B. Johnson Space Center in memory of the late president.)

NASA/PHOTO S65-33250

President Lyndon B. Johnson holds a Gemini 4 souvenir photo album, which was presented to him during his visit to the space center. Left to right are James E. Webb, NASA administrator; astronaut James A. McDivitt, command pilot of Gemini 4; Dr. Robert C. Seamans Jr., NASA associate administrator; the president; and astronaut Edward H. White II, pilot of the Gemini 4 mission.

President Kennedy said, "The exploration of space will go ahead, whether we join in it or not, and it is one of the great adventures of all time, and no nation which expects to be the leader of other nations can expect to stay behind in this race for space. Those who came before us made certain that this country rode the first waves of the industrial revolutions, the first waves of modern invention, and the first wave of nuclear power, and this generation does not intend to founder in the backwash of the coming age of space. We mean to be a part of it—we mean to lead it."

NASA/PHOTO S69-40023

Overall view of the Mission Operations Control Room in the Mission Control Center, showing the flight controllers celebrating the successful conclusion of the Apollo 11 lunar landing mission.

The beginnings

Albert Thomas, the first congressman with a degree from Rice, and George Brown, a construction tycoon with Brown and Root (now KBR) and the philanthropist for whom Rice's School of Engineering is now named, were once students and roommates at the university.

In the late 1950s, Thomas and Brown were working hard to launch a major federal research facility in Houston for the Atomic Energy Commission. As chairman of the Rice Board of Governors, Brown arranged a generous donation—1,000 acres of land near Clear Lake—to Rice from the Humble Oil and Refining Company. The strategy was to offer the land to the federal government as an incentive to locate in Houston, but their plan fell through.

Rice's specific connection to what would become JSC started in early 1961, when Humble Oil and Refining Company Chairman Morgan Davis, Texas congressman Albert Thomas and Rice officials attempted to persuade NASA to build its $60,000,000 facility in Houston to support manned spaceflight.

Senate majority leader Lyndon B. Johnson, fellow Texan and political ally of Brown and Thomas, was a key figure in the dawn

NASA/PHOTO

An aerial view of the Manned Spacecraft Center in 1963 during early construction. The view faces the southwest. Second Street runs basically north and south on the right side of the image. The unfinished red structure to the right of center and roughly 100 yards south of the elevated water storage tank is the Central Heating and Cooling Plant. In the upper left quadrant of the frame, construction appears very far along on the Central Data Office.

of the National Aeronautics and Space Council in 1958. Two years later, Johnson became vice president after Kennedy won the 1960 presidential election. Shortly before he took office, Kennedy announced that Vice President Johnson would chair the council. Then Speaker of the House Sam Rayburn and House Space Committee Chairman Olin Teague, both Texans, were instrumental in steering a space bill through Congress. Their venture was not just about beating the Soviets to the moon, but to make the South a zenith of science and space technology.

Thomas was the chairman of the House Appropriations Subcommittee that was in control of NASA's budget. Thomas and Brown made their best effort to dazzle the NASA officials as they were in competition with more than 20 other cities for placement of the Manned Spacecraft Center.

On Sept. 19, 1961, approximately a year before Kennedy's speech at Rice, James Webb, NASA's second administrator, made his decision that this new facility should be located in Houston and remain in close relations with Rice University and other educational institutions in the surrounding area.

Webb's decision was explained in a Sept. 1961 news release: "The Manned Space Flight Center location study is completed. James E. Webb, administrator of NASA, announced today the completion of the study to determine the location of the agency's new $60,000,000 Manned Space Flight Laboratory. The facility was authorized by Congress for initiation in the current fiscal year. The laboratory will be located in Houston on 1,000 acres of land to be made available to the government by Rice University. The land, in Harris County, borders on Clear Lake and on the Houston Light and Power Company Salt Water Canal.

"This grouping of the facilities in a region permitting out-of-door work for most of the year provides flexibility and a capability of expansion to meet the needs of a very large vehicle, which present projections indicate will be required for heavier payloads and deeper penetration into space beyond the moon to the planets."

A perspective of that historic speech at Rice University from Charles Edward Wilson

"Having just entered the 12th grade at Kashmere High School, I was selected to be part of the all-city band to play 'Hail to the Chief' when President Kennedy entered and exited Rice Stadium. Each high school's band director rehearsed their selected members separately, so we did not all play together until the actual day of JFK's speech. We all wore white slacks and shirts to be uniformly dressed. Being that it was so hot, it was a good thing that we did not have to wear our regular marching band uniforms. The performance went flawlessly, and I felt honored to play for the President of the United States. His speech was very inspiring, especially for a young man who had not decided upon a college major field of study. I was pretty good academically in math and the sciences, so his speech opened up visions of using these to help do something we had not done before: go to the moon. When the opportunity presented itself to become a NASA co-op in 1965, I jumped at the chance. Upon graduation in 1968, I continued working as a software developer through those first lunar landing missions … President Kennedy's challenge to our nation achieved!"

NASA/PHOTO S65-41769

View of facilities at the Manned Spacecraft Center in Houston circa 1965.

Office of the Chief Technologist: Pushing technology beyond

By Catherine Ragin Williams

Even engineers and scientists need a little time to play. That is what the Office of the Chief Technologist (OCT), at Headquarters and at Johnson Space Center, is aiming to make happen.

"Rewinding back a couple years, I think it was fairly well understood that NASA's Research and Development programs were basically geared toward mission requirements, called pull-type technology," said JSC Chief Technologist John Saiz. "You want to make sure and develop technologies in a way that they can be infused into future flight developments. But if it's all pull oriented, you're not going to get truly revolutionary stuff."

ARTWORK DONE FOR NASA BY PAT RAWLINGS OF SAIC.

Artist's concept of possible exploration programs. Two kilometers above the lava flows of Mars' Tharsis Bulge region, a geologist collects samples from the eastern cliff at the base of Olympus Mons, the solar system's largest known shield volcano. The Office of the Chief Technologist aims to develop game-changing technology that will allow us to explore farther than we have before.

The office was generated to shake things up a bit by balancing pull- versus push-type technology development.

"The OCT was created to encourage folks to take a chance and basically develop ideas that really aren't yet tied to a mission, but as a technologist or a subject-matter expert, you just have a gut feeling it will be needed someday," Saiz said.

Ideas that may have been considered too outrageous or did not fit into the typical spaceflight scheme could receive attention in the OCT, later to be incubated into something useful to the programs currently in place.

"A good example of that is the in-space manufacturing developments that we're doing right here at JSC," Saiz said. "I don't believe there is a requirement for this capability in any of the architecture studies, but it's pretty well understood that as you get further away from Earth, you're not going to be able to take all the infrastructure with you—you're going to have to scavenge and manufacture some of what you'll need in-situ."

Though that need is not driven by a current mission, one day it could be if we decide to go back to the moon or beyond to an asteroid. The idea begins in the Early Stage Innovation department and is tested when it reaches the Game-Changing Technology level. If deemed applicable to spaceflight goals, it lands in Crosscutting Capability Demonstrations divison, where the OCT works to find a home for it within our directorates.

The OCT is not only about very far-out plans. It is also grounded in sparking creative juices at JSC here and now.

"Another part of our job here is a little more nebulous, but it goes after cultural issues," Saiz said. "We're asked to initiate activities that encourage an environment of ingenuity and creative thinking. One of the things we sponsored a couple years ago was the Innovation 2010 symposium, where we had a centerwide conversation about innovation and how to streamline how we do things. That is now an annual event."

The OCT didn't stop there. It went on to help turn Building 3 into what is now the Collaboration Center. This month, it will go even further than that.

"We're developing a lot of creative spaces, like the Innovation Design Center, which will be opening this fall in Building 348," Saiz said. "A lot of people here know of it as the 'sandbox,' where people can go to and 'play' with ideas."

This figurative sandbox is equipped with workstations that have Computer-Aided Design capabilities, a machine shop for building prototypes and other mediums such as whiteboards and chalkboards, where ideas can really take shape.

"You can build your idea and make it physically real at the Innovation Design Center," Saiz said.

Borrowing a move reminiscent of the movie "Field of Dreams," the OCT is hoping that by building this specialized setting, the game-changing ideas will multiply.

And what could be better than pushing the boundaries of what we know and understand? Maybe only flying beyond them in our own spacecraft, using the revolutionary technologies that we made possible.

Summer of Innovation inspires students **across the region**

By Rachel Kraft

When in tandem, the words "summer" and "slide" don't bring positive connotations to an educator's ears. In fact, during June, July and August, several members of Johnson Space Center's Office of Education can be found working with students and teachers to limit "summer slide," the collective loss of academic skills that students may experience while on summer vacation.

Through NASA's Summer of Innovation (SoI) project, the Office of Education teamed up with nine school districts and education-focused institutions in Texas and New Mexico to provide educational material rich in science, technology, engineering and mathematics (STEM) content to middle school students. JSC's initiative, which began agencywide in 2010 in response to a national need for improved STEM education, engaged more than 1,500 students from traditionally underrepresented and underserved populations and 100 teachers in the region this year.

"Summer STEM learning programs are an ideal fit for the resources that NASA and JSC's Office of Education offered to these organizations through Summer of Innovation," said Jonathan Neubauer, the Office of Education's lead for strategic partnerships. "Seeing the excitement on the faces of the students as they built and operated their robots, investigated what it takes to make a shoebox fly and many other activities was amazing."

The efforts were designed to give students a leg up on STEM-focused curricula, inspire more students to pursue careers down those paths and help close the achievement gap. Through JSC's education experts, teleconferences, webcasts and podcasts, 4th through 9th graders engaged in educational activities rich in NASA and space-related content.

NASA/BOLDT JSC2011E077588

NASA Associate Administrator for Education Leland Melvin spoke to students and a parent during Voyage Back to School.

SoI participants from around the country had the opportunity to submit questions about life and work in space via video as part of the final educational downlink with a space shuttle crew during STS-135. JSC's Teaching From Space Office coordinated with the SoI project to offer the experience.

Student participants and community members also capped off their hard work throughout the summer initiative with Voyage Back to School at Space Center Houston. The event marked the beginning of the school year and, through STEM-related activities like air rocket launches and a space glove challenge, excited students about returning to the classroom.

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NASA/PHOTO

The DSH is put to the test at Desert RATS 2011.

simulated mission activities with the human and robotic exploration of an asteroid in mind.

Much of the excitement centered on the DSH. Sticking out like a giant anomaly in the stark wilderness, the DSH allowed the team to test independent crew operations and the habitability of the X-Hab Loft and Hygiene Module. Evaluating these elements is critical for understanding what logistics and living conditions human explorers will need for deep-space missions.

Complex communication systems were also put through the rigors. The team purposefully imposed barriers in various communication methods, making it nearly impossible for the crew to carry on a normal conversation. However, understanding what to do when lapses in communications take place during a long-duration mission is an invaluable learning tool for researchers.

To be truly successful in the outer reaches of the cosmos, we must work alongside our hardier crew members: robots. Robonaut 2 was united with its mobility base, Centaur 2, to work with the team and perform remote operations.

From spacewalking in the desert to collecting samples to monitoring crew conditions, Desert RATS 2011 provided the platform to go one step further into deep space—all in the comfort, relatively speaking, of our own Earthly playground.

NASA/REGAN GEESEMAN 585046MAIN

Geologist Carolyn Tewksbury-Christle gathers a sample during a spacewalk while attached to the Astronaut Positioning System.

Spotlight: **Mike and Jeff Fox**

Mike (Manager, Human Test Support Group for Wyle Integrated Science and Engineering Group) and **Jeff** (Deputy Manager, Orion Multi-Purpose Crew Vehicle [MPCV] Crew Systems Integration) **Fox**

Mike and Jeff Fox are a father/son duo who have devoted almost 64 years combined to furthering Johnson Space Center's human spaceflight efforts. From Mike's stint as a human test subject during the Manned Spacecraft Center's (Johnson Space Center's) infancy to Jeff's work with the MPCV, the next exploration vehicle that will go beyond low-Earth orbit, this pair has been instrumental in the agency's past—and what will be our future.

Q: Coolest part of your job?
A: Mike: Working with my son, Jeff. We've collaborated on making videos on the zero-g airplane, and I watched Jeff serve as the launch panel operator for the X-38 flying aboard Dryden's B -52 at Edwards Air Force Base.
Jeff: Following in my father's footsteps and being part of the NASA organization; working every day in a job I love; and being part of a team of amazing people.

Q: How long have you worked at NASA/JSC?
A: Mike: Thirty-six-and-a-half years.
Jeff: Twenty-seven years.

Q: First job at NASA or JSC?
A: Mike: Head of the Human Test Subject Pool at the Manned Spacecraft Center. I also served as a test subject riding the centrifuge and altitude chambers.
Jeff: Shuttle Mission Simulator systems instructor.

Q: If you could trade places with any other person for a week, famous or obscure, living or dead, real or fictional, who would it be?
A: Mike: Gordy Howe. I played hockey as a youngster in Detroit, and Howe was my boyhood hero.
Jeff: Buddy Hall, to experience the pinnacle of an endeavor.

Q: What would people be surprised to know about you?
A: Mike: For a short period of time I was a professional boxer.
Jeff: I play a lot of billiards, mainly 9-ball, pocketing 75,000 to 100,000 balls a year.

Q: Favorite hobbies away from the office?
A: Mike: In-line skating, snowmobiling, white-water rafting, softball and body surfing. My son and I have held season tickets to the Rockets for the past 25 years.
Jeff: Playing 9-ball, boogie boarding, driving my '67 Mustang, in-line skating, skiing/snowmobiling, white-water rafting and turning double plays with Dad in JSC softball games.

Q: Favorite travel destination (or place you'd love to go)?
A: Mike: My wife and I are planning a trip to Australia and New Zealand when I retire.
Jeff: Hawaii, never tire of it; especially Kauai.

Q: What was your proudest moment in your JSC career?
A: Mike: When my late wife, son, son-in-law and I all received Silver Snoopy awards.
Jeff: Being given the opportunity to serve as the launch panel operator for the X-38 flying aboard Dryden's B-52.

PHOTOS COURTESY OF MIKE AND JEFF FOX

Q: When did you first become interested in space, and why?
A: Mike: A large part of my 27-year Navy career was affiliated with aviation, and an interest in space exploration came naturally.
Jeff: At the age of 8, seeing my dad ride the JSC centrifuge, and having flight surgeons stay with us in Hawaii on their way to Apollo carrier crew recoveries.

Q: Describe yourself in three words
A: Mike: Athletic, adventurous and energetic.
Jeff: Enthusiastic, persistent and optimistic.

Q: JSC turned 50 in September. What do you think the center's greatest legacy will be?
A: Mike: Fifty years of manned spaceflights (Mercury, Gemini, Apollo and the space shuttles). Thousands of federal employees and contractors have dedicated their entire professional careers to designing and building spacecraft for outer space exploration.
Jeff: Home of the astronauts, Mission Control and human spaceflight. The technical expertise and character of the people that design and operate these complex space systems make it look so easy, when it isn't.

WANTED!

Do you know a JSC colleague or team that does something extraordinary on or off the job? Whether it's a unique skill, interesting work, special professional accomplishment, remarkable second career, hobby or volunteerism, your nominee(s) may deserve the spotlight!

The Roundup shines the light on one special person or team each month, chosen from a cross section of the JSC workforce. To suggest "Spotlight" candidates, send your nomination to the JSC Roundup Office mailbox at jsc-roundup@mail.nasa.gov. Please include contact information and a brief description of why your nominee(s) should be considered.

A legacy in photos

On Aug. 23, the University of Houston-Clear Lake hosted an opening reception for a photography exhibit honoring the legacy of the space shuttle. The exhibit, "Celebrating Shuttle: An American Icon," was introduced by our own Johnson Space Center Director Mike Coats, former Space Shuttle Program Manager John Shannon and veteran space shuttle and International Space Station astronaut Michael Fincke.

NASA/PHOTO JSC2011E079155

NASA/PHOTO JSC2011E079169

NASA/PHOTO JSC2011E079159

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"You certainly have to be very flexible with the environment," Louis said. "You have to be very patient with people, but probably more the system, because I think the system sometimes drives the way people react. You have to kind of balance that. Keep your sense of humor, keep your sense of purpose."

Ah, sense of humor. That has certainly been an invaluable asset to Louis, as he can attest.

"I remember one of the shows we did in Paris, the entry to the exhibit was this huge hallway with graphics," Louis said. "It had information on the Big Bang Theory, about how the universe had formed … and lots of nice shots from the Hubble Space Telescope, like nebulas and star patterns."

It also contained a fair amount of text that the team had written, proofed and run through the approval chain.

"We thought we had put it before as many eyes as possible to make sure the content was correct," Louis said. "So we're over there putting the graphics up, and the exhibit was about finished. It was the 20th anniversary of Apollo 11, so we had the Apollo 11 astronauts at the air show. And Mike Collins was walking through, and he's reading stuff and looking at it … and he looked up and said, 'You know you guys misspelled galaxy?'"

Total buzz kill. However, the team was able to fix it before the Paris Air Show opened.

But it's funny moments like those, and many other enriching experiences, that made this career a dream job for the manager many fondly call "Luigi" because of his Italian roots.

"I never would have guessed, growing up in a little East Texas town, that I would come to Houston, Texas, and work for a space agency—and certainly not for this length of time," Louis said. "But I can't imagine me *not* doing this. I never would have guessed that I would meet the people I've met, worked with the people that I've worked with and gone the places that I've gone."

NASA/PHOTO JSC2006E49705

NASA mascot "Cosmo" and Louis Parker draw attention to the astronaut autograph tent set up outside Kyle Field prior to the kickoff of the Texas A&M vs. Nebraska football clash.

Roundup

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Salute Our **Space Shuttle Celebration**

The Salute Our Space Shuttle Celebration was a chance for Johnson Space Center team members to join together in solidarity behind a program to which many have dedicated their careers: The Space Shuttle Program and its 30 years of incredible achievements.

Devoted fans endured record temperatures to take part in the wide array of festivities, which included a Kids Zone, moonwalks, astronaut autographs, Building 9 mock-ups, a flyover and many bands rocking the night away. Entertainment on stage included the Dave Kelldorf Band, Less Than Serious, a DJ and finally, Five For Fighting to cap off the show.

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